CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

July 27, 2001

H.R. 2436
Energy Security Act

As reported by the House Committee on Resources on July 25, 2001

SUMMARY

H.R. 2436 would make several changes to federal programs related to the production of oil, natural gas, geothermal resources, and hydropower. CBO estimates that enacting H.R. 2436 would decrease direct spending by $111 million over the 2002-2006 period, but would increase direct spending by $326 million over the 2002-2011 period. Because the bill would affect direct spending, pay-as-you-go procedures would apply. CBO also estimates that implementing H.R. 2436 would cost $136 million over the 2002-2006 period, assuming appropriation of the necessary amounts.

H.R. 2436 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates that enacting this legislation would result in a large increase in federal mineral receipts paid to the state of Alaska, but a reduction in receipts paid to other states. Further, some state and local governments might incur costs to match federal funds authorized by the bill or share in the costs of authorized projects. Any such expenses would be voluntary.

MAJOR PROVISIONS

Title I would add new requirements for certain federal agencies to study rights-of-way for transporting energy resources across federal lands, inventory the energy potential of certain public lands, and review federal regulations to ensure they do not create barriers to emerging energy-efficient technologies. The title also would authorize a new interagency task force to develop procedures for expediting environmental reviews and permits for interstate natural gas pipelines.

Title II contains several provisions that would affect programs for developing federal offshore and onshore oil and gas resources. Those provisions would:

- Direct the Secretary of the Interior to provide royalty relief to marginally producing offshore and onshore oil and gas producers under certain conditions;

- Require the Secretary of the Interior to grant royalty credits to reimburse certain lessees, operators, or operating rights owners for certain costs incurred by those parties to comply with the National Environmental Policy Act of 1969 (NEPA);

- Provide specified royalty relief for companies that bid on certain leases on the outer continental shelf during the two-year period following the bill's enactment;

- Expand the Secretary of the Interior's authority to spend receipts from the sale of oil and gas royalty production taken in-kind;

- Establish new administrative requirements for the Department of the Interior's (DOI's) onshore oil and gas leasing programs; and,

- Authorize DOI to establish regional cooperative oil and gas research and information centers to research oil and gas exploration and to archive and provide public access to certain data.

Title III would amend the Geothermal Steam Act of 1970 to provide various types of royalty relief and royalty credits for geothermal energy producers on federal lands. It also would authorize DOI to administer geothermal leasing programs on public lands under military jurisdiction and add new administrative and reporting requirements.

Title IV would authorize the appropriation of $20 million for the Bureau of Reclamation to study and replace pumps that may need to be modernized at federal water delivery projects. This title also would authorize the bureau to conduct additional studies to identify opportunities to increase power production and operational efficiencies at federal hydroelectric power facilities.

Title V would direct the Secretary of the Interior to establish a competitive oil and gas leasing program for the coastal plain of the Arctic National Wildlife Refuge (ANWR) in Alaska. Under the bill, a portion of the proceeds from that program would be deposited in a new fund established by the bill. H.R. 2436 would authorize the appropriation of $5 million a year from that fund to provide financial assistance to certain Alaskan communities.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 2436 is shown in the following table. The costs of this legislation fall within budget functions 270 (energy), 300 (natural resources and environment), 800 (general government), and 950 (undistributed offsetting receipts).

Table 1. Summary of Estimated Budgetary Effects of H.R. 2436

	By Fiscal Year, in Millions of Dollars				
	2002	2003	2004	2005	2006
CHANGES IN DIRECT SPENDING					
Estimated Budget Authority	18	22	-201	60	-10
Estimated Outlays	18	22	-201	60	-10
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Estimated Authorization Level	59	16	22	21	22
Estimated Outlays	46	24	23	21	22

BASIS OF ESTIMATE

For this estimate, CBO assumes that H.R. 2436 will be enacted by the end of fiscal year 2001. Significant components of the estimated costs are described below.

Direct Spending (including offsetting receipts)

H.R. 2436 contains several provisions that would affect direct spending (and offsetting receipts, which are a credit against direct spending). CBO estimates that enacting those provisions would result in a net reduction in direct spending of $111 million over the next five years, and a net increase of $326 million over the next 10 years. Provisions estimated to have a significant impact on direct spending are described below. Table 2 details those estimated effects.

Table 2. Estimated Changes in Direct Spending for H.R. 2436

	By Fiscal Year, in Millions of Dollars				
	2002	2003	2004	2005	2006
CHANGES IN DIRECT SPENDING					
Net Proceeds from Oil and Gas Leasing in ANWR					
Estimated Budget Authority	0	0	-250	0	-80
Estimated Outlays	0	0	-250	0	-80
Royalty Relief for Certain Marginally Producing Wells					
Estimated Budget Authority	1	5	17	28	38
Estimated Outlays	1	5	17	28	38
Reimbursing Nonfederal NEPA Costs through Royalty Credits					
Estimated Budget Authority	26	26	26	26	26
Estimated Outlays	26	26	26	26	26
Royalty Relief on the Outer Continental Shelf					
Estimated Budget Authority	-15	-15	0	0	0
Estimated Outlays	-15	-15	0	0	0
Geothermal Royalty Relief					
Estimated Budget Authority	5	5	5	5	5
Estimated Outlays	5	5	5	5	5
Authority to Spend Proceeds from Royalty Production Taken In-Kind					
Estimated Budget Authority	1	1	1	1	1
Estimated Outlays	1	1	1	1	1
Total Changes in Direct Spending					
Estimated Budget Authority	18	22	-201	60	-10
Estimated Outlays	18	22	-201	60	-10

Net Proceeds from Oil and Gas Leasing in ANWR. H.R. 2436 would direct the Secretary of the Interior to implement an oil and gas leasing program for the coastal plain of ANWR pursuant to the Mineral Leasing Act (MLA) and in accordance with certain administrative requirements and deadlines specified in the bill. CBO estimates that leasing ANWR would result in bonus bid payments, ongoing rental payments, and royalties once production begins. Production is not expected to begin for at least 10 years after the decision to lease the reserve is made. Under the MLA, Alaska would receive 90 percent of the gross proceeds generated from the leasing program. Under the bill, the balance would be deposited either in the Treasury or in a special fund established by the bill. Amounts in the new special fund could be used, subject to appropriation, to provide financial assistance to certain local Alaskan communities.

For this estimate, CBO assumes that DOI would hold the first lease sale during fiscal year 2004 and another in 2006. Based on DOI's most recent assessment of the economically recoverable undiscovered petroleum resources in the coastal plain, CBO estimates that the proposed leasing program would generate gross receipts (in 2004 and 2006) totaling about $3.3 billion. Those receipts would be largely offset by payments to Alaska totaling $2.97 billion over the same period. Hence, we estimate that net receipts to the federal government would total $330 million over the next 10 years. Based on the Energy Information Administration's price forecast for 2020 and other price projections, CBO used an average price of $20 per barrel (in 2000 dollars) during the 2012-2040 period to prepare this estimate of bonus bids for the rights to explore for oil and gas in ANWR. Assuming a sales price of $20 per barrel (delivered to the West Coast), DOI estimates that there is a 50 percent probability that at least 2.4 billion barells of oil would be produced from ANWR.

Royalty Relief for Certain Marginally Producing Wells. H.R. 2436 would require the Secretary of the Interior to reduce the royalty rate that the government receives for production from certain federal onshore and offshore oil and gas wells when the prices of oil or gas fall below thresholds specified in the bill for at least 180 consecutive days. Such royalty relief would be provided for onshore and offshore wells that produce small volumes of oil or gas as defined in the bill.

H.R. 2436 does not specify how much royalty relief would be provided, or how long such relief would last. Under current law, DOI already provides some royalty relief to low-producing onshore oil wells. Under that program, once a well qualifies for a reduced royalty rate, that lower rate remains in effect for the remaining life of the well. For this estimate, we assume that any royalty relief provided would remain in effect as long as the qualifying wells continue to produce. Based on information from DOI regarding the estimated level of production from these wells, CBO estimates that this provision would reduce gross federal royalties by about $491 million over the next 10 years—this is less than 1 percent of anticipated royalty receipts during that time. Of the estimated $491 million total, $242 million would be for onshore leases, and $249 million would be for offshore leases. For this estimate, CBO assumes that the probabilities of oil prices remaining below the specified threshold for at least 180 days are small—less than 5 percent in any given year. For natural gas prices, probabilities start low and increase over the 2002-2011 period, reflecting increasing uncertainty as the forecast extends into the future.

Because states generally receive half of the proceeds from federal oil and gas royalties produced from onshore properties, forgone receipts under this proposal would be partially offset by a corresponding decrease in direct spending of $121 million over the next 10 years for payments to states. Hence, CBO estimates that this provision would increase net direct spending by $370 million over the 2002-2011 period.

Reimbursing Nonfederal NEPA Costs through Royalty Credits. Under current law, DOI is responsible for completing all analyses required under NEPA to proceed with mineral leasing and development for federal lands. According to DOI, funding levels typically fall short of the amounts necessary to complete all of the NEPA work required in order to review and approve applications for permits to drill that are submitted by mineral producers. Because of such funding shortfalls, those producers often pay third-party consultants to complete NEPA work on behalf of DOI to expedite the permitting process. H.R. 2436 would require the Secretary to grant royalty credits to onshore oil, natural gas, and geothermal lessees, operators, or operating-rights owners who voluntarily incur such costs. Any such royalty credits must be applied to the lease for which the costs were incurred.

The details regarding how DOI would implement these changes are uncertain. Based on information from DOI, we expect that royalty credits would begin in 2002, and could retroactively apply to any royalties from existing leases that remain under production. Based on information from industry representatives, CBO estimates that the oil and gas industry spends about $20 million a year and the geothermal industry spends about $2 million a year for costs that might qualify for royalty credits under the bill. As a result, estimated costs over the next 10 years would be about $220 million. (Total onshore oil, gas, and geothermal royalty receipts to the federal government are expected to total about $1.9 billion this year.) We also estimate that NEPA costs previously incurred for leases that remain under production could total about $150 million. Thus, CBO estimates that forgone royalties under this provision could total $370 million over the 2002-2011 period, depending on how DOI implements this program.

Because states generally receive 50 percent of gross receipts generated from the development of federal oil, natural gas, and geothermal resources, any forgone royalties resulting from this provision would be partially offset by a corresponding decrease in direct spending for payments to states totaling $185 million over the 2002-2011 period. Hence, we estimate that this provision would increase net direct spending by $185 million over the next 10 years.

Royalty Relief on the Outer Continental Shelf. H.R. 2436 would require the Secretary of the Interior to provide specified royalty relief for companies that bid on certain leases on the outer continental shelf during the two years after the bill's enactment. In general, selling a lease with a royalty waiver would increase the potential profitability of a lease, leading oil companies to raise their initial bonus bids. Thus, we expect that some lost royalty receipts due to the waiver would be offset by higher initial bonus bid receipts. But since industry discounts the value of future profits, an overall loss of receipts would occur over the life of the lease as higher initial bonus bids would not fully offset forgone royalty receipts. Based on information from DOI, CBO estimates that this provision would increase receipts from bonus bids by about $30 million for the four lease sales expected over the 2002-2003 period, but would reduce offsetting receipts from royalty relief by about $91 million over the 2002-2011 period. Most of those receipts would be forgone in the last few years of the next decade because production from such offshore leases generally does not begin until five or more years after a lease sale. Royalty losses would continue over the life of the leases.

Geothermal Royalty Relief. H.R. 2436 would make several changes to DOI's geothermal leasing program that would result in forgone receipts from geothermal leases. First, the bill would permanently reduce the geothermal royalty rate from 10 percent to 8 percent. H.R. 2436 also would exempt certain lessees from royalty payments during the 2002-2006 period. Based on information from DOI regarding the estimated level of geothermal production over the next 10 years, we estimate that those provisions would reduce gross royalty receipts by $72 million over the 2002-2011 period. Under current law, states receive 50 percent of the geothermal proceeds produced within their boundaries. The loss of receipts under this bill would be partially offset by a corresponding decrease in direct spending for payments to states, which we estimate would total $36 million over the 2002-2011 period. Hence, we estimate that the net increase in direct spending under this provision would total $36 million over that period.

Authority to Spend Proceeds from Royalty Production Taken In-Kind. Under current law, when collecting royalties from federal oil and gas leases, the Secretary of the Interior may accept payments in the form of product (known as in-kind) rather than cash. Generally, the net proceeds from the sale of in-kind royalties are deposited in the Treasury. For fiscal year 2001, however, the Secretary has limited authority to retain and spend proceeds from the sale of royalty oil and gas from certain pilot programs. Expenditures from those proceeds are limited to the costs of transporting, processing, and disposing of the oil and gas taken from those pilot projects. For the 2002-2006 period, H.R. 2436 would expand the spending authority from its current limitation to pilot projects to allow the Secretary to use receipts from the sale of oil and gas taken in-kind from any lease, thus allowing the program to expand. Expenditures would still be limited as under current law.

According to DOI, accepting royalties in-kind rather than cash payments is preferable in some cases but not in others. For instance, there are some circumstances where the government could pool its royalty production and use receipts to pay for services at a lower negotiated rate than an individual company. In such cases, the government could end up with royalty proceeds that are greater than if they had taken cash as a royalty payment. In other cases, where the volume of production is small, scattered over large areas, and far from market centers, taking royalties in-kind may be preferable to oil and gas producers, but could result in fewer net royalties for the federal government than accepting cash payments. In addition, allowing DOI to sell oil and gas requires the agency to compete in the marketplace with more experienced buyers and sellers, thus increasing the chance that taking royalties in-kind rather than in cash would lower overall federal receipts. Furthermore, results from previous royalty-in-kind projects have been mixed. According to the agency, expanding its authority as proposed by the bill would allow the agency to continue to experiment with royalty-in-kind programs to identify opportunities to increase the return on federal oil and gas resources. Hence, CBO expects that, while the agency might make more money in some cases under H.R. 2436, there will be other cases where the incentive to experiment may result in fewer receipts.

Based on information from DOI regarding current spending of receipts from the sale of royalties taken in-kind, we estimate that expanding the agency's authority to use receipts to cover additional sales of royalty production would increase gross direct spending by $10 million in 2002 and that the agency would increase the amount of royalties taken in-kind each year over the life of the program such that gross direct spending for eligible costs would increase to $25 million by 2006. We estimate that, on average, proceeds from the sale of royalty production would offset most of those increases. We estimate that about 5 percent of such spending would not be offset, resulting in a net cost of about $1 million a year over the 2002-2006 period.

Spending Subject to Appropriation

H.R. 2436 contains several provisions that would authorize appropriations for new studies, grants, research, and administrative programs. Assuming appropriation of the necessary amounts, CBO estimates it would cost $136 million over the 2002-2006 period to implement these provisions (See Table 3).

Pump Modernization Study. H.R. 2436 would authorize the appropriation of $20 million for the Bureau of Reclamation to study which pumps used for federal water delivery projects are in need of replacement and to replace those pumps where the benefits of replacement, including energy cost savings, outweigh the costs. We estimate that the bureau would spend $15 million in 2002, $4 million in 2003, and $1 million in 2004 for those activities. The costs associated with pump modernization would be considered reimbursable and thus would be repaid by project beneficiaries on a negotiated schedule. Alternatively, under the bill, the bureau could enter into cost-sharing agreements with local beneficiaries for up-front payment of all or a portion of the reimbursable costs. In this case, the net cost of this provision could be somewhat lower than the above estimate.

Table 3. Changes in Spending Subject to Appropriation for H.R. 2436

	By Fiscal Year, in Millions of Dollars				
	2002	2003	2004	2005	2006
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Pump Modernization Study					
Authorization Level	20	0	0	0	0
Estimated Outlays	15	4	1	0	0
Financial Assistance for Alaskan Communities					
Authorization Level	0	0	5	5	5
Estimated Outlays	0	0	5	5	5
USGS Regional Technology Transfer Centers					
Estimated Authorization Level	14	14	14	14	14
Estimated Outlays	11	13	14	14	14
Administration of Oil and Gas Leasing Program in ANWR					
Estimated Authorization Level	3	0	1	0	1
Estimated Outlays	2	1	1	0	1
Studies, Reports, Administrative Activities					
Estimated Authorization Level	22	2	2	2	2
Estimated Outlays	18	6	2	2	2
Total Changes in Spending Subject to Appropriation					
Estimated Authorization Level	59	16	22	21	22
Estimated Outlays	46	24	23	21	22

Financial Assistance for Alaskan Communities. Under the legislation, up to $10 million of the annual net proceeds generated from oil and gas leases in ANWR would be deposited in an interest-bearing fund established by the bill. The bill would authorize the appropriation of $5 million annually from that fund for purposes of providing financial assistance to certain Alaskan communities that are directly impacted by oil and gas exploration and development. Based on the amounts we estimate would be generated each year from ANWR leases, CBO estimates that grants to Alaskan communities would total $15 million over the 2004-2006 period.

USGS Regional Technology Transfer Centers. The bill would direct the Secretary of the Interior to establish regional offices, operated by the United States Geological Survey (USGS), to research oil and natural gas exploration and production. Each office would archive and provide public access to this and other regional oil and natural gas production data. The USGS would administer the offices in conjunction with the geological agency of the state in which each center is located. Based on information from the USGS, CBO assumes that the agency would spend $66 million during the 2002-2006 period to establish 20 offices.

Administration of Oil and Gas Leasing Program in ANWR. Based on information from DOI, CBO estimates that implementing an oil and gas leasing program in ANWR would cost $5 million over the 2002-2006 period. That estimate reflects the estimated cost of completing the environmental impact statement required under the bill, promulgating and revising regulations related to the program, and administering two competitive lease sales.

Other Provisions. Finally, H.R. 2436 includes several provisions that would authorize several new studies, reports and activities. Those provisions would require certain federal agencies to:

- Determine whether existing rights-of-way across federal lands can support new pipelines or other transmission facilities;
- Inventory the energy potential of certain public lands;
- Review federal regulations to ensure they do not create barriers to emerging energy-efficient technologies;
- Establish an interagency task force to develop procedures to expedite environmental reviews and permits for interstate natural gas pipelines;
- Analyze existing assessments of natural gas resources in the Gulf of Mexico;
- Study impediments to efficient administration of onshore oil and gas leasing programs;
- Expedite decisions regarding federal geothermal development applications;
- Determine whether existing moratoria and withdrawals that preclude geothermal leasing and development on federal lands are still warranted;
- Study whether energy production at federal hydropower facilities can be increased; and
- Identify strategies for maximizing the energy potential of federal hydroelectric power plants.

Based on information from the agencies that would be responsible for implementing these provisions, CBO estimates that this work would cost $30 million over the 2002-2006 period, subject to the availability of appropriated funds for DOI and other agencies.

PAY-AS-YOU-GO CONSIDERATIONS

The Balanced Budget and Emergency Deficit Control Act sets up pay-as-you-go procedures for legislation affecting direct spending or receipts. The net changes in outlays that are subject to pay-as-you-go procedures are shown in Table 4. For the purposes of enforcing pay-as-you-go procedures, only the effects in the current year, the budget year, and the succeeding four years are counted.

Table 4. Estimated Impact of H.R. 2436 on Direct Spending and Receipts

	By Fiscal Year, in Millions of Dollars										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Changes in outlays	0	18	22	-201	60	-10	61	76	85	99	116
Changes in receipts	Not applicable										

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

H.R. 2436 contains no intergovernmental mandates as defined in UMRA, but enactment of this bill would have a number of other impacts on state, local, and tribal governments. Because enactment of this bill would affect amounts received by the federal government for mineral leases on federal lands, which are shared with the states, it also would affect the states' share of those receipts. CBO expects that the state of Alaska would receive substantial benefits from enactment of this legislation. First, the state would receive 90 percent of the gross proceeds of oil and gas leases in ANWR. CBO estimates that the state's share of these receipts would total almost $3 billion over the next 10 years. In addition, a portion of the receipts retained by the federal government ($5 million per year) would be used to provide financial assistance to certain Alaskan communities.

CBO estimates, however, that some other western states would receive smaller payments from the federal government due to provisions in the bill that would result in reduced federal receipts in those states. These provisions would reduce royalties for geothermal energy production on federal lands, allow federal reimbursement of certain costs associated with oil, natural gas, and geothermal leases, and provide royalty relief for marginally producing oil and gas wells. Total state losses would be about $350 million over the next 10 years.

Other sections of the bill would authorize federal spending that probably would be matched by state or local governments. H.R. 2436 would authorize funds for Cooperative Oil and Gas Research and Information Centers, which would be operated in partnership with state geological survey agencies, and would carry out research paid for in part by nonfederal funds. The bill also would authorize federal funds for the Bureau of Reclamation to replace some pumps at federal water delivery projects. Project beneficiaries, probably including some state and local governments might pay a share of these costs, and the rest would later be reimbursed by those beneficiaries. Any state or local participation in these projects would be voluntary.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

The bill contains no new private-sector mandates as defined in UMRA.

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